

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Reissue Application of :  
Tohru UEDA et al. :  
U.S. Patent No. 5,026,835 : ATTN: APPLICATION BRANCH  
Issued June 25, 1991 :  
PYRIMIDINE 2'-METHYLIDENE : *unpublished*  
NUCLEOSIDE COMPOUNDS

REISSUE DECLARATION AND POWER OF ATTORNEY

Honorable Commissioner of Patents and Trademarks

Washington, D.C. 20231

Sir:

Undersigned request that they be allowed to surrender  
U.S. Letters Patent No. 5,026,835 for an improvement in:  
PYRIMIDINE 2'-METHYLIDENE NUCLEOSIDE COMPOUNDS  
which patent was granted on June 25, 1991 and is assigned in  
its entirety to Yamasa Shoyu Co., Ltd. and Yoshitomi  
Pharmaceutical Industries Ltd., corporations of Japan, on  
whose behalf and with whose consent, this application is made,  
and that said Letters Patent be reissued to undersigned for  
the invention set forth in the attached specification and  
claims.

A Request for a Title Report is submitted herewith in a  
separate paper.

Undersigned declare that their residence, post office  
address and citizenship are stated below next to their names;  
and they verily believe that they are the original, first and  
joint inventors of the improvement described and claimed in  
the foregoing reissue specification and for which improvement  
they solicit a patent; that they have reviewed and understand  
the content of the above-identified specification, including  
the claims; that they acknowledge their duty to disclose  
information of which they are aware which is material to the  
examination of this application in accordance with Title 37,  
Code of Federal Regulations 1.56(a); that they verily believe  
the original patent to be wholly or partly inoperative or  
invalid by reasons of the fact that they claimed both more

than they had a right to claim and less than they had a right to claim in the patent. In this regard:

1. In connection with claiming more than they had a right to claim in the original patent, during the prosecution of the corresponding European application, Assignees received a communication from the E.P.O. dated June 2, 1992 in which the application was rejected over JP-A-63258818 on the ground that the compounds claimed were structurally similar to the compound DMDC of said Japanese patent. DMDC is a compound wherein R<sup>1</sup> of claim 1 is -NH<sub>2</sub> and R<sup>2</sup>, R<sup>3</sup> and R<sup>4</sup> are all -H.

The original U.S. patent (claim 1) erroneously encompassed DMDC and a related compound wherein R<sup>1</sup> is -OH.

In this regard, original claim 1 in the application recited "except that R<sup>1</sup> is amino or hydroxy and both of R<sup>3</sup> and R<sup>4</sup> are hydrogen". This raised an ambiguity since it was intended by Applicants that such material be excluded and not included. Therefore, the original claim should have read "except the case where R<sup>1</sup> is amino or hydroxy and both of R<sup>3</sup> and R<sup>4</sup> are hydrogen".

An attempt was made to correct this matter in the Amendment of October 18, 1990. However, the Amendment raised even further ambiguities and, moreover, the U.S. PTO made a printing error in deleting the term "not" at the bottom line of claim 1 of the Amendment of October 18, 1990 thus even further confusing the claims.

Accordingly, the claims have been amended to clarify the fact that compounds within the scope of claim 1 wherein R<sup>1</sup> is -NH<sub>2</sub> and R<sup>3</sup> and R<sup>4</sup> are hydrogen, are excluded.

This, in turn, excludes the known compound DMDC and a related compound wherein R<sup>1</sup> is -OH, from the scope of claim 1.

Accordingly, these compounds have now been deleted from claim 1.

2. With regard to claiming less than they had a right to claim:

a. New claims 3 to 8 are directed to compounds

which were deleted from the scope of the claims during prosecution of the original patent. These compounds were subsequently found to have unobviously superior activity to DMDC.

b. The stearyl compound of claim 2 is now claimed as a single compound in claim 8 for more complete protection.

c. The term "stearyl" has been replaced by " $C_{30}$  acyl" in claim 1 to provide more complete protection and to make claim 1 properly generic to the remaining claims.

d. New claims 9 and 10 are directed to compositions, in order to provide more complete protection.

The undersigned further declare that such errors which render said Letters Patent wholly or partly inoperative or invalid arose without any deceptive intention.

The undersigned herewith offer to surrender the original patent, a soft copy of which is annexed hereto, and the original of which will be tendered before the allowance of this reissue application.

The undersigned hereby claim the benefit under 35 USC 119 of Japanese Application 63-310865 filed December 7, 1988.

8 The undersigned hereby appoint V.M. Creedon, Reg. No. 17111, John T. Miller, Reg. No. 21120, John T. Fedigan, Reg. No. 24347, Michael R. Davis, Reg. No. 25134, Matthew M. Jacob, Reg. No. 25154, Jeffrey Nolton, Reg. No. 25408, Henry M. Zykorie, Reg. No. 27477 and Michael Stone, Reg. No. 32442, who together constitute the firm of WENDEROTH, LIND & PONACK, jointly and severally, attorneys to prosecute this application and to transact all business in the U.S. Patent and Trademark Office connected therewith.

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Direct telephone calls to:

(202) 371-8850

1-01

1st Inventor : Tohru UEDA, deceased, by his legal representative  
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Citizenship : \_\_\_\_\_  
P.O. Address : \_\_\_\_\_

2-00

2nd Inventor : Takuma SASAKI  
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5th Inventor : Shinji SAKATA  
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Choshi-shi, Chiba 288, Japan

6-00

6th Inventor : Keiji YAMAGAMI  
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Citizenship : Japan  
P.O. Address : Yoshitomi Pharmaceutical Industries,  
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Residence : Saitama, Japan JPY  
Citizenship : Japan  
P.O. Address : Yoshitomi Pharmaceutical Industries,  
Ltd. c/o Tokyo Research Laboratories,  
7-25, Koyata 3-chome, Iruma-shi,  
Saitama 358, Japan

Undersigned further declare that all statements made herein of our own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the instant patent application or any patent issuing thereon.

1st Inventor: Tohru UEDA, deceased, Date: \_\_\_\_\_  
by his legal representative

2nd Inventor: Takuma SASAKI Date: \_\_\_\_\_

3rd Inventor: Akira MATSUDA Date: \_\_\_\_\_

4th Inventor: Takanori MIYASHITA Date: \_\_\_\_\_

5th Inventor: Shinji SAKATA Date: \_\_\_\_\_

6th Inventor: Keiji YAMAGAMI Date: \_\_\_\_\_

7th Inventor: Akihiro FUJII Date: \_\_\_\_\_



#15

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which patent was granted on June 25, 1991 and is assigned in  
its entirety to Yamasa Shoyu Co., Ltd. (now Yamasa Corporation  
as a result of a corporate name change) and Yoshitomi  
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whose behalf and with whose consent, this application is made,  
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b. The stearoyl compound of claim 2 is now claimed as a single compound in claim 8 for more complete protection.

c. The term "stearoyl" has been replaced by " $C_{17}C_{30}$  acyl" in claim 1 to provide more complete protection and to make claim 1 properly generic to the remaining claims.

d. New claims 9 and 10 are directed to compositions, in order to provide more complete protection.

The undersigned further declare that such errors which render said Letters Patent wholly or partly inoperative or invalid arose without any deceptive intention.

The undersigned herewith offer to surrender the original patent, a soft copy of which is annexed hereto, and the original of which will be tendered before the allowance of this reissue application.

The undersigned hereby claim the benefit under 35 USC 119 of Japanese Application 63-310865 filed December 7, 1988.

The undersigned hereby appoint V.M. Creedon, Reg. No. 17111, John T. Miller, Reg. No. 21120, John T. Fedigan, Reg. No. 24347, Michael R. Davis, Reg. No. 25134, Matthew M. Jacob, Reg. No. 25154, Jeffrey Nolton, Reg. No. 25408, Henry M. Zykorie, Reg. No. 27477 and Michael Stone, Reg. No. 32442, who together constitute the firm of WENDEROTH, LIND & PONACK, jointly and severally, attorneys to prosecute this application and to transact all business in the U.S. Patent and Trademark Office connected therewith.

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(202) 371-8850

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2nd Inventor : Takuma SASAKI 3-00 ✓  
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3rd Inventor : Akira MATSUDA 4-00 ✓  
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5th Inventor : Shinji SAKATA 6-00 ✓  
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P.O. Address : Yoshitomi Pharmaceutical Industries,  
Ltd. c/o Tokyo Research Laboratories,  
7-25, Koyata 3-chome, Iruma-shi,  
Saitama 358, Japan

Undersigned further declare that all statements made  
herein of our own knowledge are true and that all statements  
made on information and belief are believed to be true; and  
further that these statements were made with the knowledge  
that willful false statements and the like so made are  
punishable by fine or imprisonment, or both, under Section  
1001 of Title 18 of the United States Code and that such  
willful false statements may jeopardize the validity of the  
instant patent application or any patent issuing thereon.

ADDED PAGE TO DECLARATION & POWER OF ATTORNEY

FOR U. S. PATENT APPLICATIONS

2-11 /  
I, Sumiko UEDA, hereby declare that I am a citizen of Japan residing at 6-27, Maruyamanishimachi 8-chome, Chuo-ku, Sapporo-shi, Hokkaido 064 Japan and that I am executing and signing the declaration to which this is attached as the sole heiress of:

Tohru UEDA, late a citizen of Japan formerly residing at 6-27, Maruyamanishimachi 8-chome, Chuo-ku, Sapporo-shi, Hokkaido, Japan.

That, upon information and belief, I aver those facts which the inventor is required to state.

I further declare that all statements made herein of my own knowledge are true, and that all statements on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements, and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Sumiko UEDA Sumiko Ueda Date July 25, 1993

1st Inventor:	<u>Sumiko Ueda</u> Tohru UEDA, deceased, by his legal representative	Date: <u>July 25, 1993</u>
2nd Inventor:	<u>Takuma Sasaki</u> Takuma SASAKI	Date: <u>August 6, 1993</u>
3rd Inventor:	<u>Akira Matsuda</u> Akira MATSUDA	Date: <u>July 21, 1993</u>
4th Inventor:	<u>Takanori Miyashita</u> Takanori MIYASHITA	Date: <u>July 20, 1993</u>
5th Inventor:	<u>Shinji Sakata</u> Shinji SAKATA	Date: <u>July 20, 1993</u>
6th Inventor:	<u>Keiji Yamagami</u> Keiji YAMAGAMI	Date: <u>July 15, 1993</u>
7th Inventor:	<u>Akihiro Fujii</u> Akihiro FUJII	Date: <u>July 15, 1993</u>



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Tohru UEDA et al. :  
U.S. Patent No. 5,026,835 : ATTN: APPLICATION BRANCH  
Issued June 25, 1991 :  
PYRIMIDINE 2'-METHYLIDENE :  
NUCLEOSIDE COMPOUNDS :

CONSENT OF ASSIGNEE TO FILING OF REISSUE APPLICATION

Honorable Commissioner of Patents and Trademarks  
Washington, D.C. 20231

Sir:

Yamasa Shoyu Co., Ltd. (now Yamasa Corporation as a result of a corporate name change) and Yoshitomi Pharmaceutical Industries, Ltd., co- Assignees of the entire interest in the subject patent, by virtue of an Assignment recorded on February 5, 1990 at Reel 5231, Frames 204 to 205, hereby consent to the filing of the attached Reissue application.

The undersigned have reviewed all the evidentiary documents in the chain of Title of the above patent and, to the best of the undersigned's knowledge and belief, title is in the Assignees indicated above.

The undersigned verify that they are authorized to take this action on behalf of Yamasa Corporation and Yoshitomi Pharmaceutical Industries, Ltd.

The undersigned hereby declare that all statements made herein of their own knowledge are true, and that all statements made on information and belief are believed to be true; and further, that these statements are made with the knowledge that willful false statements, and the like so made, are punishable by fine or imprisonment, or both, under Section 1001, Title 18 of the United States Code, and that

such willful false statements may jeopardize the validity of  
the application or any patent issuing thereon.

July 21, 1993  
Date

Takashi Nagata  
Name, Title  
Authorized Signing Officer of  
Yamasa Corporation

July 19, 1993  
Date

Detmuro Takahashi  
Name, Title  
Authorized Signing Officer of  
Yoshitomi Pharmaceutical  
Industries., Ltd.